

ABSTRACT OF THE DISCLOSURE

The present invention provides a method of sensorless control of a linear reciprocating electrodynamic machine used for driving a thermoacoustic device, and/or a similar frequency dependent load. Sensorless control is accomplished by estimating the state of predetermined performance parameters at the linear machine through the use of a system model. Thereafter, the method comprises providing a control means operative to obtain the estimated performance parameters and cause manipulation of at least one input parameter to the linear machine such that desired performance parameters are obtained in view of the estimated performance parameters.